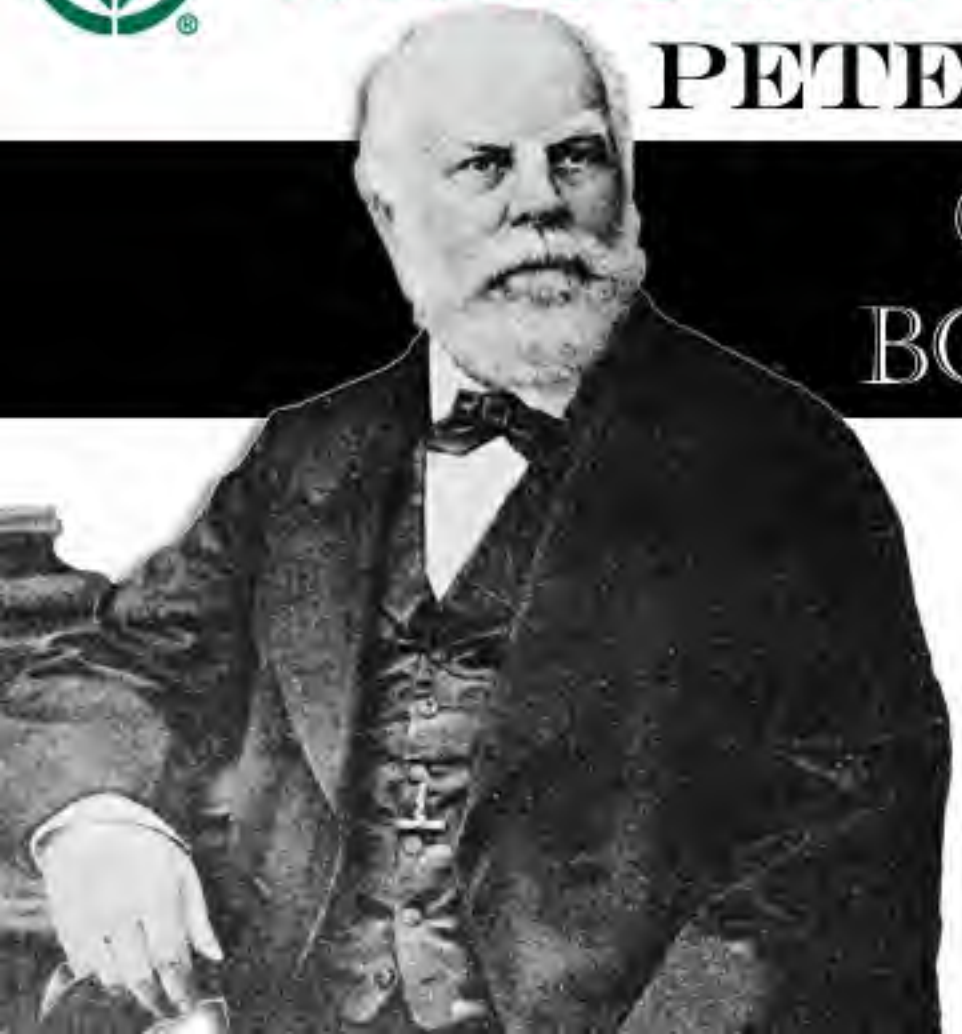
Missouri Botanical Garden
Peter H. Raven Library

George Engelmann Botanical Notebooks



Pagination Note:
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2 tab	P. Goeggii	59
3 tab	P. pictus	60

FG8-302

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cm
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MISSOURI BOTANICAL GARDEN

11256

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GEORGE ENGELMANN PAPERS

Pinus Greggii Engelm

May 15 1878

Leaf 1.1 mm wide ✓ Gregg Exp. Mexico 1848

hypoderm ± Thin layer interrupted by the series of elements all around under the epidermis, no other. Ducts lateral, parenchymatous

Top of leaf dentate flat

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X415

402 Pinus Greggii

Sall-Ac Dr Gregg. Aug 30. 1848

Aug 26 1863

0.040

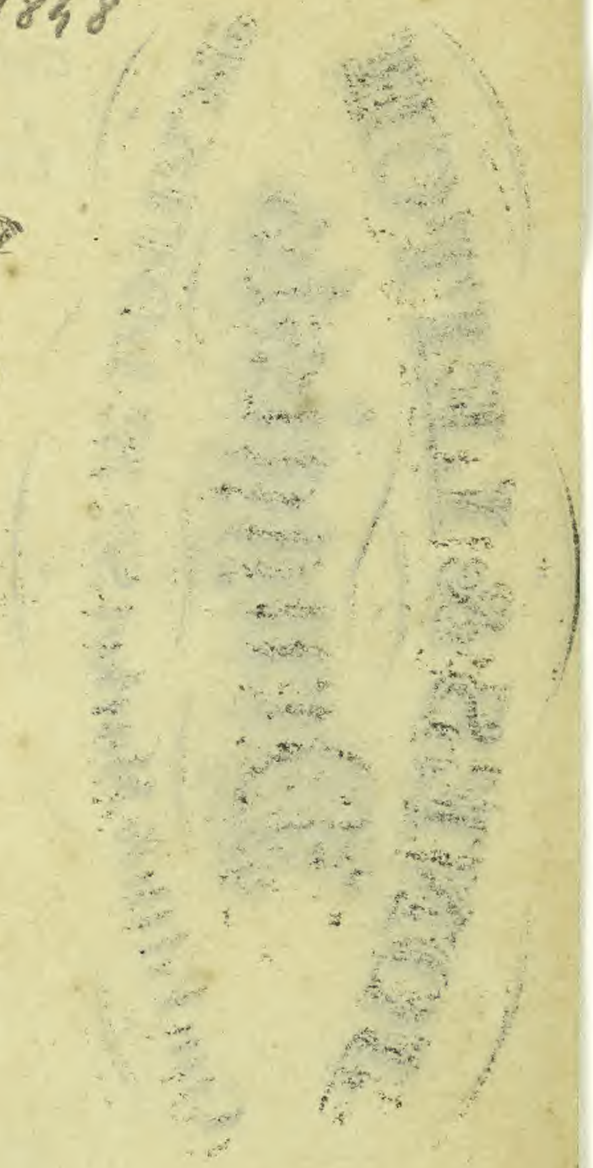
0.034

0.036

x 4

Cover Leather scale (or cusita) bract like x 10

x 10



0.030 – 0.040

mostly 0.035

say 0.033 – 0.037

over

JONES & LETCH
Druggists
Cor. Fifth & Market Sts. ST. LOUIS, MO.

Label says: coll Aug 30[14] but the appearance is as if coll in May — terminal bud not yet developed above the inflorescence —

Inflorescence rarely 6 lines long
anets oval, 4 l. long, rarely exceeding the
broadly lanceolate ~~ovate~~ nearly entire bracts
oval
4 involucral bracts of equal length, the lateral broader
strongly carinate, upper one also carinate, lower one concave

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Pia patula

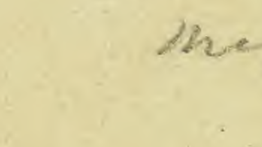
May 16 1878

Mex. Dr Gregg 689 c

x30

sometimes only two dots
usually 3, sometimes a 4th
one

no hypoderm cells or only traces



upper ventral

dorsal epiderm

x60

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P. patula

May 16 1878

Chromberg 633 46 Berlin

no dents seen

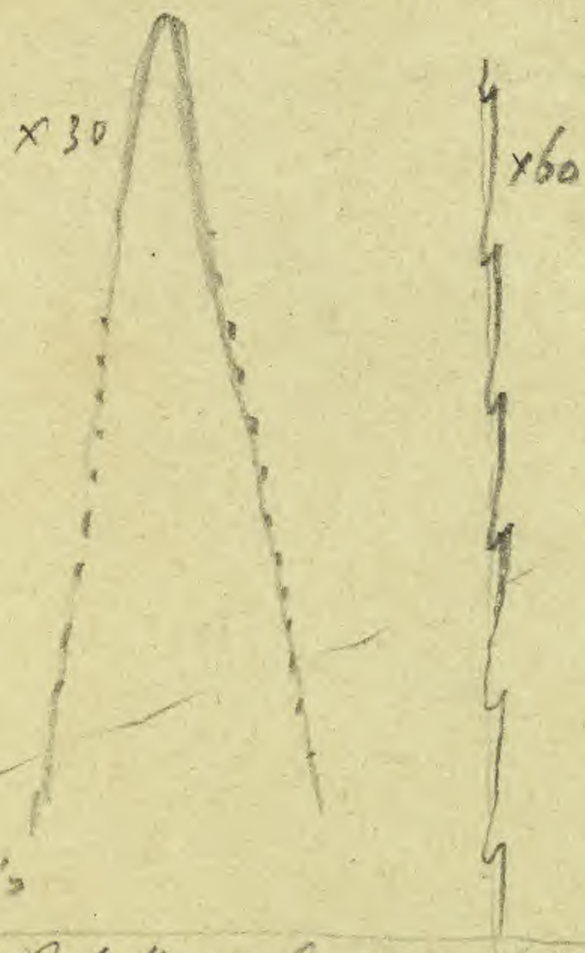
very small and few

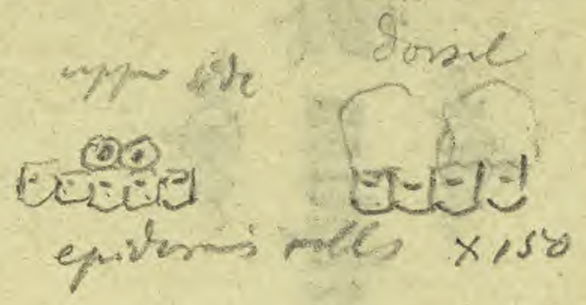
hypoderm cells in ribs

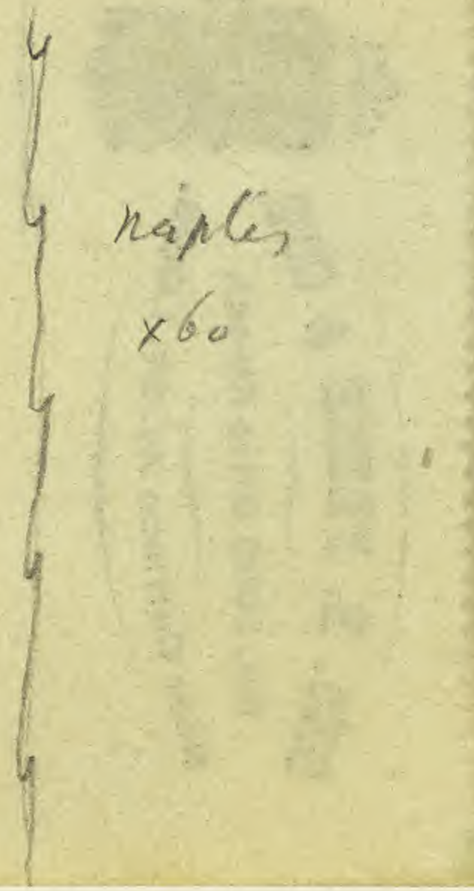
Epider cells very small

and externally rounded

as in all specimens of this sp.







H Bol Neapl 19/12 68

no dents

some little hypoderm

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May 15 1878

Pinus patula !

type schiede = HB Berl. No 163

Leaf 0.7 mm

× 30

× 150

× 60

2 vasis inhibent, parenchymatosis

no hypoderm at all

(Canada balsam

(Alcohol ?)

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11 tab

57

P. rigida

287-297

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Pinus rigida

Lake George N.Y.

St Louis July 15 1862

upper surface

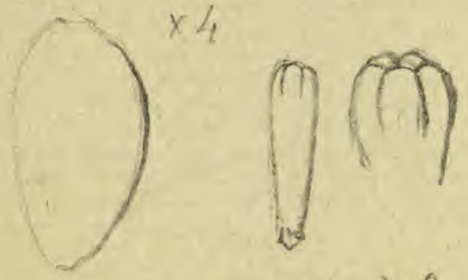
X 2

outside

seed rhombic, angled at the outside rounded above about below 2 edged below the middle

albumen

X 4



not quite ripe?

gathered End of August

5 Cotyledons

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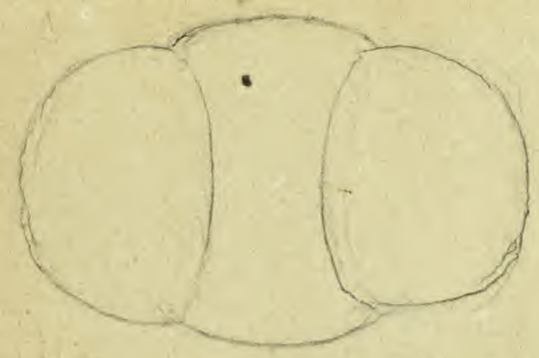
May 31 1863

Pinus rigida

Chaddsford Pa

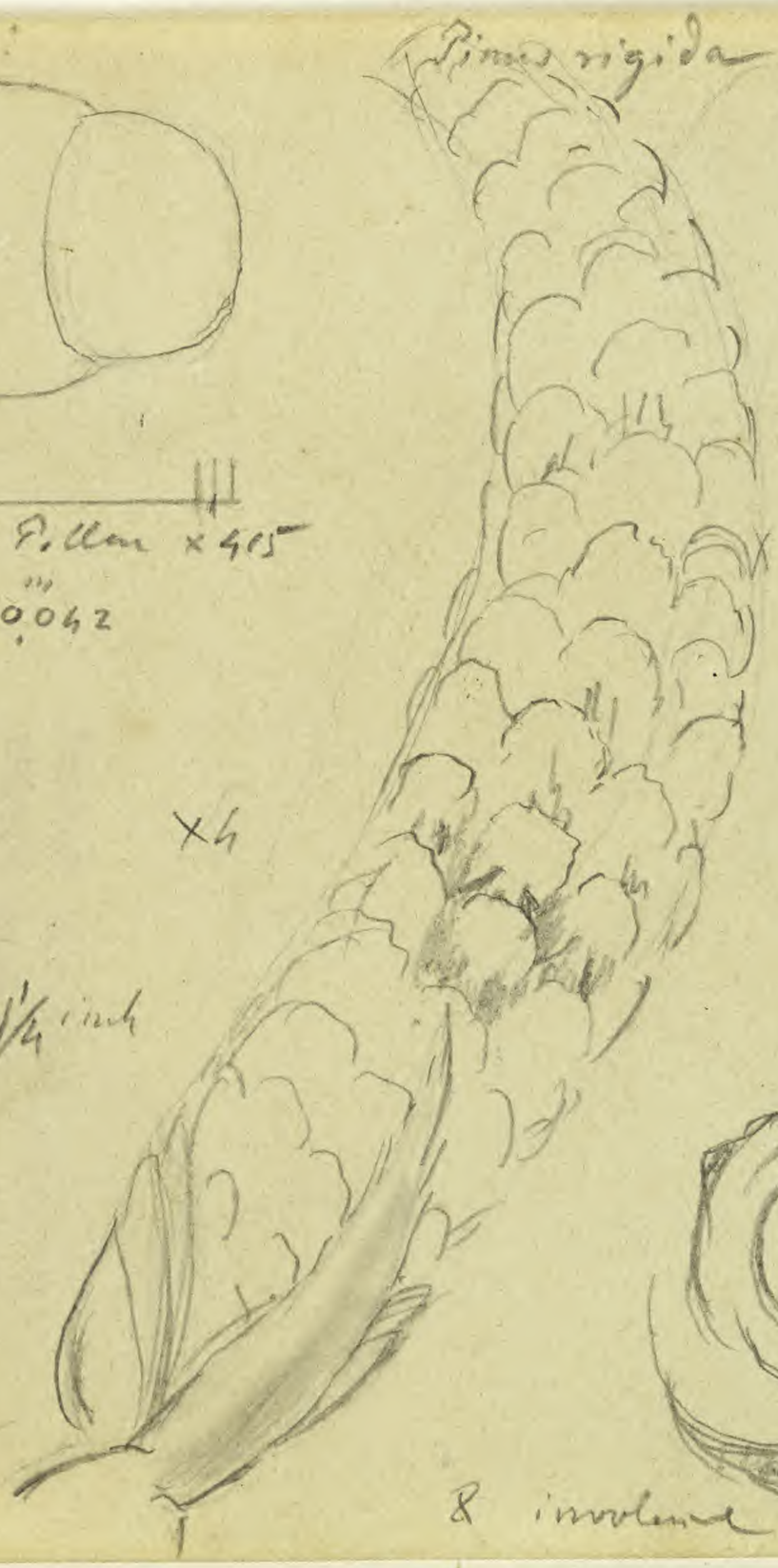


sizes of Pollen x 405

0.039 – 0.042

x 10

x4



aments 3/4 – 1 1/4 inch long

8 involucre Bracts

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1815—
1820
1245
3850

39

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Pinus rigida June 2?-1861

Chadsford, Pa

×½

×10

HOLTON & CHESHIRE, PHILADELPHIA
HOLTON'S TEXTILE

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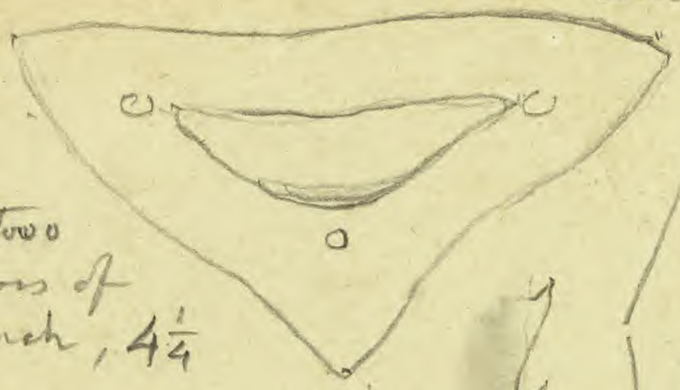
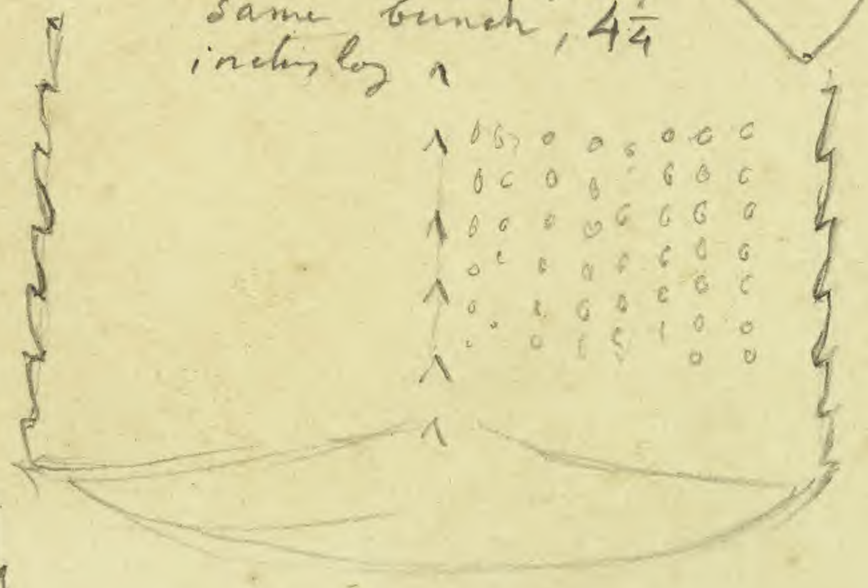
Pinus rigida Beverly 10th July 1863

leaves of male flowering branches

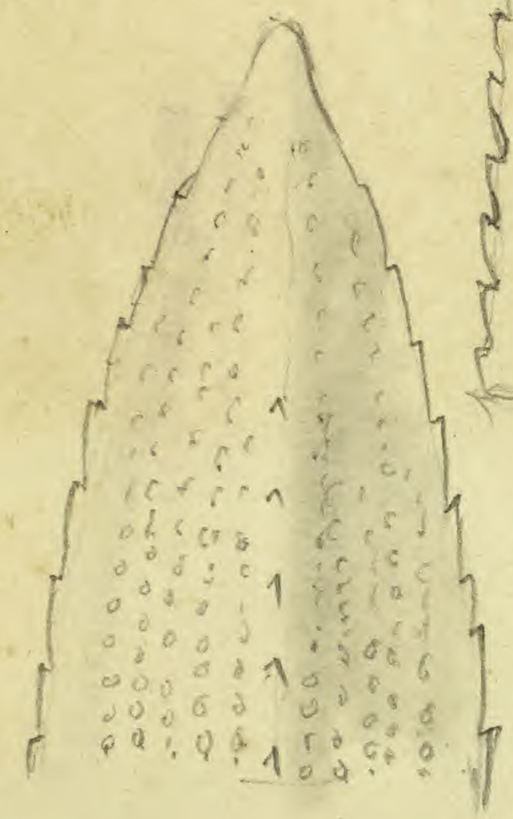
×30



Sect of two soaked leaves of same bunch, 4¼ inches long ×



Sect. of a soaked leaf 3 inches long ×30

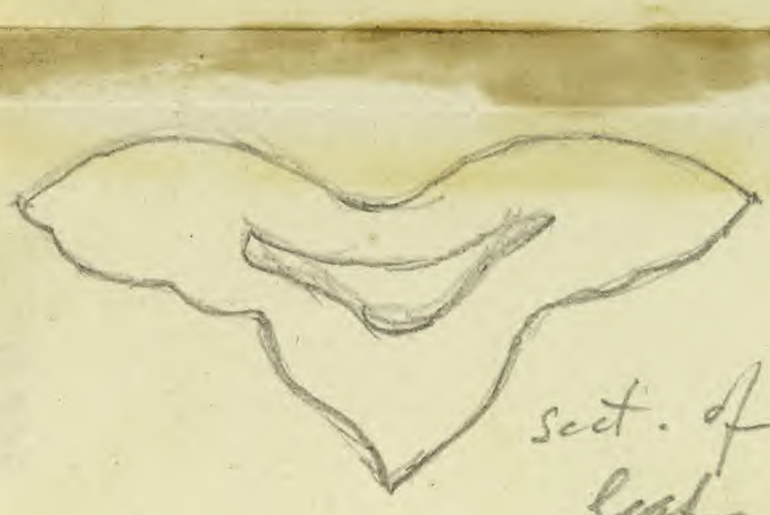


×60

sect of dry leaf

Marginal vein

×60



sect. of dry leaf

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JONES & LEITCH

Druggists

Cor. Fifth & Market Sts. St. LOUIS, MO.

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× 415

Pinus rigida

Beverly, Mass. a. gr. 1863

Sg 1863

m
0.041

m
0.043

× 4

Upper side

m
0.036 – 0.042

6–7 involucral bracts

male aments in different specimens 7–9 and 12–15 or 18 lines long

whole spike ¾ – 1¾ inch long, may be called capitate; axis of spike 5–8 l. long.

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ARTHUR LEITCH,

APOTHECARY AND CHEMIST,

Sixth and Market streets, St. Louis, Mo.

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Pinus rigida

March 15th 1871

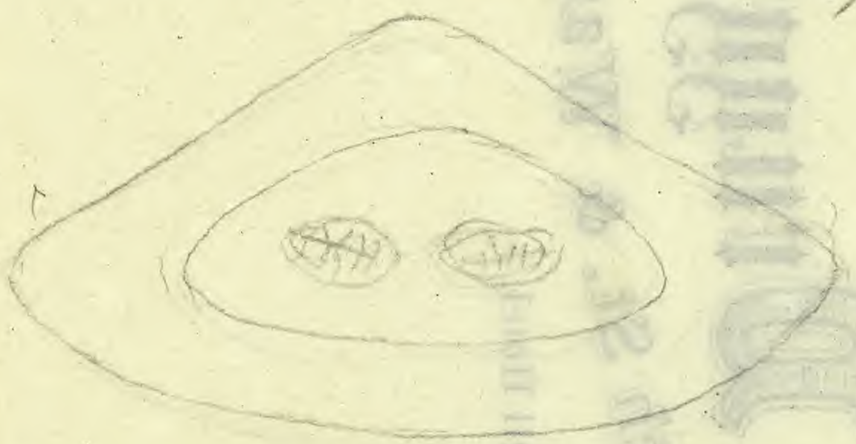
Altoona, Pa, Nov 1st 1869

x 30

x30

x60

x 30



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Druggist,

Cor. Sixth St. & Washington Ave,

Opposite Lindell Hotel, **ST. LOUIS, MO.**

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P. rigida

Lake George, Aug 1856

Mank 20 1871

×30

×30

×60

×30

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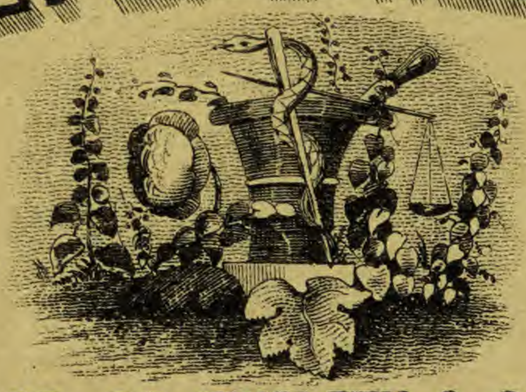
EDWIN R. SWAIN & Co



Apothecaries & Pharmaceutists.

S. W. CORNER OF TWELFTH & OLIVE STREETS,

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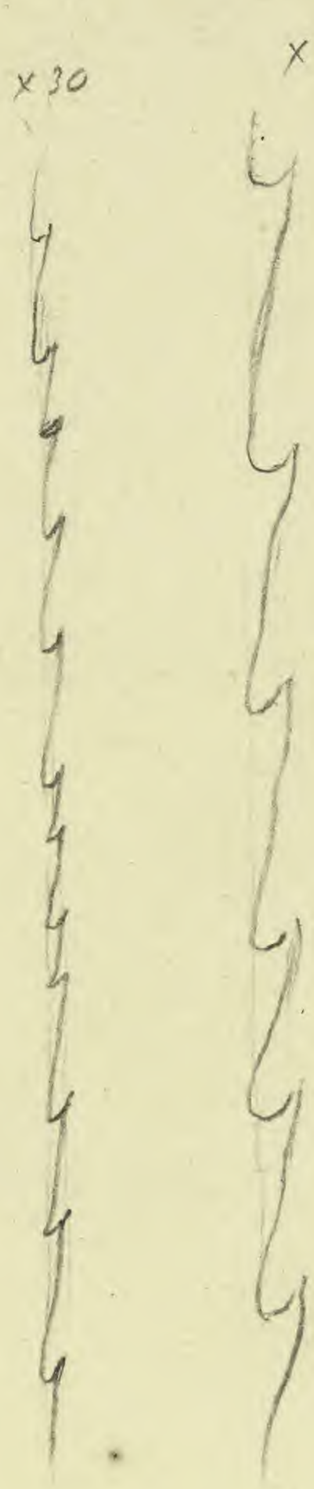
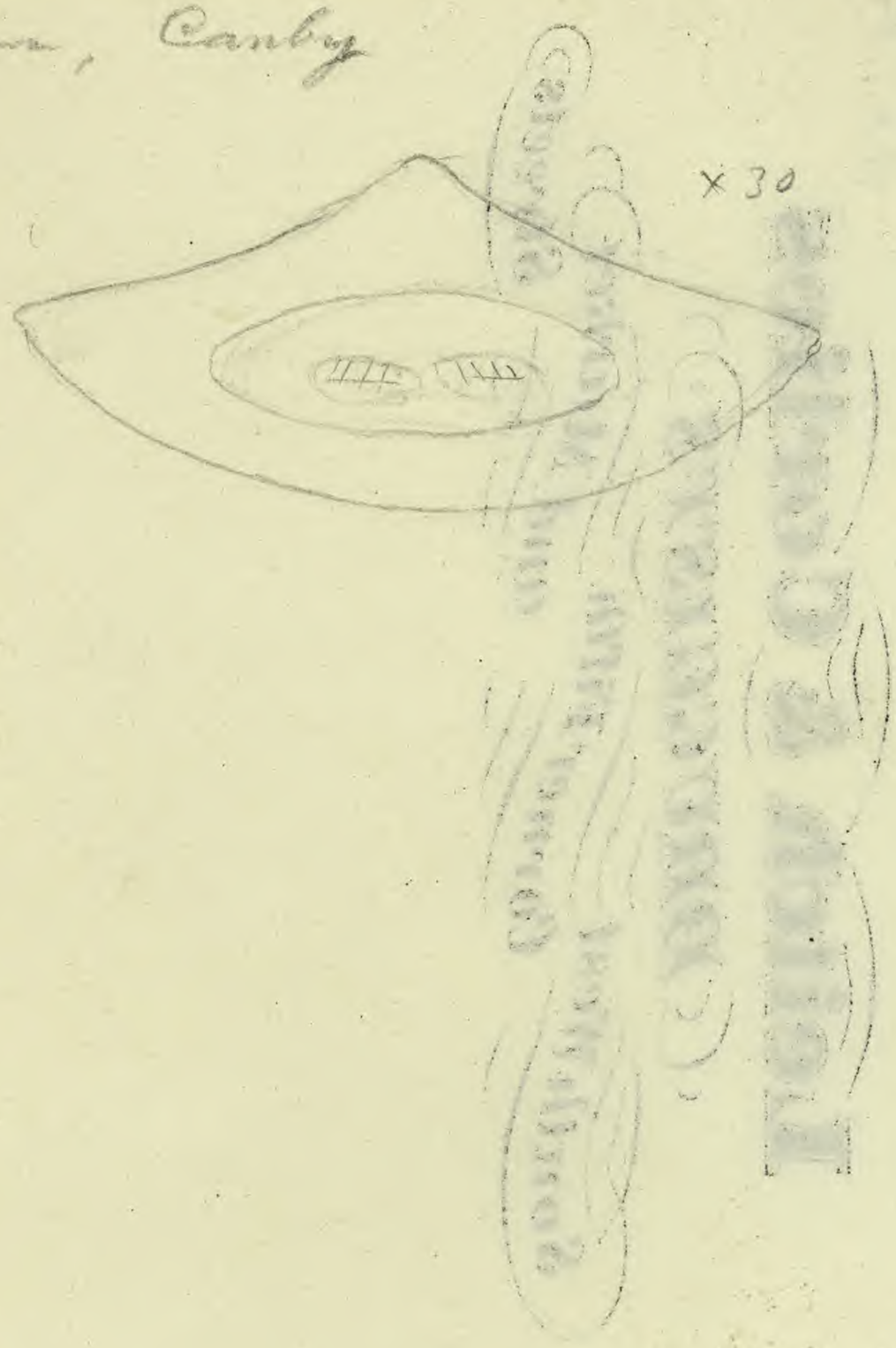
P. rigida

Delaware, Canby

20 March 1871





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Leitch & Corlies

DRUGGISTS

South West Corner Fifth and Market Streets

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Rigida

Beverly Mass 1856

May 21 1875

no hypoderm around ducts

vallecular and thin areas surface

sometimes a 4th accessory

duct on sheath

×60

Early, Delaware

no hypoderm or ducts

vallecular accessory ones

parenchymatous or closed to sheath

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Cor. 5th and Walnut St

MASTBROOK'S PHARMACY

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PURE WINES AND LIQUORS FOR MEDICAL USE.

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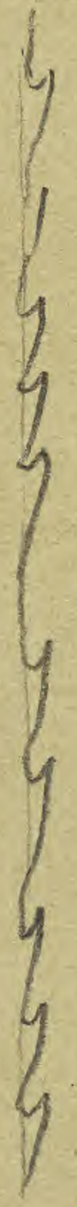
May 21 1878

R. rigida

Sandy Hill N.Y. 1856

×30



×60

few hypodermis cells at angles,
fewer on surfaces, or Cover
in small Clusters, or appar
scattered.
Ducts usually 3, peripheral
sometimes 1–3 close to sheath
Ducts often with a few weak hypodermis cells

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Cor. 5th and Walnut St

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May 21 1878

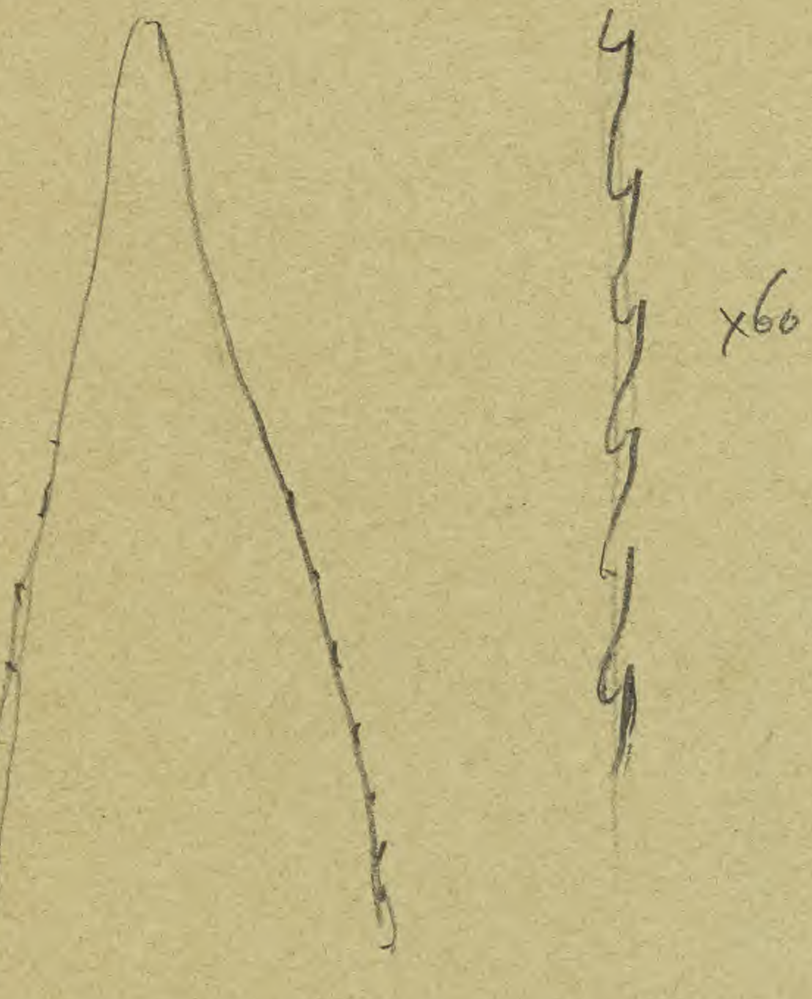
P. rigida

Altoona 1869

Leaf 1.7 mm wide

× 30

hypoderm all over surface ÷
small bundles of a few small cells
few or none around 3 ducts



×60

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61

2 Tab

P. Jacote

303-4

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Pinus Teocote

May 15 1878

Leaf 1.2 mm wide HB Berlin 633 Ehrenberg, Mexico

×30

hypoderm all around in interrupted layers
none inside at all
Ducts small, parenchymatous

×60

Teocote Hab Neapl May
is very similar

P. Teocote. H. B.
Neapl
is very similar, hypoderm smaller stronger

Hort. Thurek, Antiberg.
has narrower leaves, with
hypoderm
with sheath

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Rio Jacobs
Mexico Gregg 628 b

May 15 1878

Leaf 1.4 mm wide

x 30

usually 2, rarely 3 short
parenchymatous
hypoderm ÷ beneath
all around vascular
region

x60

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